



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

US EPA RECORDS CENTER REGION 5



468167

REPLY TO THE ATTENTION OF:

NOV 26 2013

SC-6J

Grant P. Gilezan
Dykema
400 Renaissance Center
Detroit, MI 48243

RE: Corrective Action Plans for Addressing Deficiencies and Concerns at the G&H
Landfill Superfund Site

Dear Mr. Gilezan:

This letter requires the G&H Landfill Site, Macomb County, Michigan (Site), Settling Defendants to submit corrective action plans to address problems with components of the Site's source control and groundwater remedial actions. The corrective action plans are to be submitted consistent with the Scope of Work (SOW) attached to the Consent Decree entered in *United States v. Browning-Ferris Industries, Inc., et al.*, Civil Action No. 92 CV 75460 OT.

The Remedy

As background, the United States Environmental Protection Agency (EPA) issued a Record of Decision (ROD) on December 21, 1990, that selected a remedy for the Site comprising the following actions:

- Installation of a modified RCRA Subtitle C landfill cover to prevent direct contact with contaminated media and reduce the rate of precipitation infiltrating to the water table.
- Excavation of contaminated soils from areas outside of the landfill cover and placement of these impacted soils beneath the landfill cover.
- Installation of a slurry wall around the landfill areas to physically contain the contaminated groundwater and a toe drain on the west side of the landfill to capture leachate for treatment.
- Installation of a groundwater extraction and treatment system to capture and hydraulically contain the landfill contaminants.

- Implementation of a monitoring program to assess the efficacy and progress of the groundwater cleanup.
- Restoration of impacted wetlands and establishment of new wetlands to replace those lost to contamination or remedy implementation.
- Extraction of groundwater in the groundwater contaminants plume outside of the landfill containment system through use of extraction wells until cleanup standards for groundwater outside of the landfill based on Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and State of Michigan criteria for protection of groundwater quality (approximately 30 years). Extracted groundwater to be treated on site and discharged to the Clinton River or discharged to the DWSD treatment plant if pretreatment criteria are met.
- Institutional controls in the form of deed restrictions to regulate development of the landfill and groundwater use in off-site areas.

The Groundwater Cleanup Standards from the 1990 ROD were as follows:

<u>Contaminant</u>	<u>Cleanup Standard</u>
Benzene	1 ppb
Xylene	20 ppb
Ethylbenzene	30 ppb
Arsenic	0.02 ppb*
Lead	5 ppb
Trichloroethene	3 ppb
Tetrochloroethene	0.7 ppb
cis-1,2-Dicloroethene	1 ppb
Trans-1,2-Dicloroethene	100 ppb
Vinyl Chloride	0.02 ppb
1,1-Dichlorethene	0.4 ppb

** Naturally occurring (background) levels found at the G&H Site may be higher than the Cleanup Standard. In that event, background levels will become the Cleanup Standard.*

The ROD stated that "[t]he goal of this remedial action is to restore groundwater to its beneficial use, which is, at this site, the actual drinking water source east of the landfill and a potential drinking water source south of the landfill." The ROD also stated that "[i]t is projected that the groundwater extraction and treatment system may attain the Groundwater Cleanup Standards in the groundwater within 30 years."

EPA issued an Explanation of Significant Differences (ESD) for the Site remedy on March 13, 1992. In the ESD, EPA made the following changes to the selected remedy:

- The Frost Protection Layer of the Landfill Cap could be reduced from the 42 inches to 30 inches.
- Containment could be achieved by a combination of physical and hydraulic methods. As a result, the slurry wall did not need to completely encircle the landfill, and a series of extraction wells and French drains were used to provide hydraulic containment where physical containment had been eliminated.
- EPA, in consultation with Michigan Department of Natural Resources, also changed the groundwater cleanup standards for three chemical contaminants to their respective analytical detection limits. The revised groundwater cleanup standards are as follows:

<u>Contaminant</u>	<u>1990 ROD Cleanup Standard</u>	<u>1992 ESD Cleanup Standard</u>
Tetrochloroethene	0.7 ppb	1.0 ppb
Vinyl Chloride	0.02 ppb	1.0 ppb
1,1-Dichlorethene	0.4 ppb	1.0 ppb

As explained in the SOW, the hydraulic containment component of the amended remedy called for a groundwater gradient control network to provide an inward 2.0-foot hydraulic gradient across the slurry wall. SOW at 6. Further, a minimum of one extraction well was to be located "in the DWSD easement. . . . The well(s) shall be operated and maintained to continuously prevent the groundwater table or landfill contaminants from contacting the watermain." SOW at 7.

Regarding the groundwater cleanup, in the March 2000 Remedial Action Final Construction Report for the Site, the Settling Defendants noted:

The [Consent Decree] required the construction of a downgradient groundwater extraction system at the Site. The groundwater extraction system approved in the final design consists of a downgradient pipe and media drain system to capture the limit of the downgradient plume and an enhancement pipe and media drain system to collect higher impacted groundwater from within the plume. The [Settling Defendants] obtained U.S. EPA approval in a February 12, 1999 letter to delete the downgradient portion of the system based on [an] application for deletion of the downgradient system. The approval was contingent on the continued operation of the northernmost portion of the downgradient collection system (enhancement drain), implementation of a contingency plan, monitoring, and the provision of an alternative water supply. . . . The enhancement pipe and media drain was installed and is currently operating as designed.

March 2000 Remedial Action Final Construction Report at 6-7.

Deficiencies In The Remedy

The 2011 Five-Year Review (FYR) identified the following deficiencies in the remedial action at the Site:

- Failure to demonstrate hydraulic containment in the SW corner of the Phase II Landfill.
- Failure to maintain the 96-inch DWSD water main in a dewatered condition.
- Failure to maintain a consistent 2-foot inward gradient across the slurry wall.

In addition to these deficiencies, the 2011 FYR noted the following causes for concern:

- The discharge and accumulation of orange colored liquids at the toe of the Phase III Landfill.
- Potential inadequacies in the monitoring well network and list of analytical parameters necessary to ensure proper functioning of the remedy.

The 2011 FYR also noted a number of compounds exceeding established MCLs or cleanup standards derived under Michigan's former Act 307 in the downgradient aquifer plume. Further, data reviewed and analyzed by EPA show the following:

- Arsenic cleanup standards are being exceeded in the groundwater downgradient of the containment system, with predominantly either no trend, or an upward trend in contamination levels.
- Benzene standards are being exceeded in the groundwater downgradient of the containment system, with predominantly either no trend, or an upward trend in contamination levels.
- Cis-1,2-Dichloroethene cleanup standards are being exceeded in the groundwater downgradient of the containment system, with predominantly no trend in contamination levels.
- Lead cleanup standards are being exceeded in the groundwater downgradient of the containment system, with predominantly either no trend, or an upward trend in contamination levels.

- Vinyl chloride cleanup standards are being exceeded in the groundwater downgradient of the containment system, with predominantly no trend in contamination levels.
- Barium was detected outside the containment system at levels above MCLs.

Given that the remedy assumed a 30-year period for attaining the groundwater cleanup standards, and given that remedy construction completion was achieved in 2000 and has been in operation for nearly 14 years, and given that the contaminants listed in the previous paragraph show either no trend or an upward trend in contaminant levels, it is questionable whether the groundwater cleanup standards will be met within 16 more years of operation of the remedy as currently constructed and operated.

Corrective Action Plans

Based on the forgoing, EPA, in consultation with the Michigan Department of Environmental Quality (MDEQ), hereby invokes Paragraph II.B.7. (Source Containment System; Correction of Deficiencies) of the SOW. Paragraph II.B.7. of the SOW provides:

Should groundwater level measurements show that the source containment system is not maintaining hydraulic and/or physical containment of the Site EPA, in consultation with the [MDEQ], shall request Settling Defendants to provide a plan for corrective action. Settling Defendants, within 20 days of receipt of the request, shall submit a corrective action plan to EPA for review and approval. The corrective action plan shall include a schedule for any investigative or construction work necessary to correct any deficiencies noted. If EPA does not approve the corrective action plan, EPA shall provide comments to Settling Defendants who shall resubmit the plan within 10 days after receipt of comments. Upon approval of the corrective action plan, Settling Defendants shall implement the plan in accordance with the schedule set forth in the approved plan.

Based on the forgoing, EPA hereby also invokes Paragraph II.E.6. of the SOW (Installation and Operation of a Groundwater Extraction, Collection, Treatment, and Discharge System; Correction of Deficiencies/Adverse Hydrologic Conditions). Paragraph II.E.6. of the SOW in pertinent part provides:

If the groundwater monitoring program indicates that insufficient water is being withdrawn by the extraction system so that groundwater contaminant concentrations in the leading edge of the plume are not decreasing or that groundwater contaminant concentrations are not decreasing at the rate necessary to achieve Cleanup Standards within 30 years, EPA, in consultation with [MDEQ] may notify Settling Defendants of the deficiency. Upon notice of a deficiency, Settling Defendants shall provide to EPA, within 30 days of the notice, a plan for corrective action. If EPA disapproves all or a portion of the plan, Settling Defendants shall submit a revised corrective action plan to EPA within 10 business days of notification by EPA of disapproval of the plan and

receipt of comments. Upon approval of the corrective action plan, Settling Defendants shall implement the plan in accordance with the timetable in the approved plan.

Two years have now passed without adequate resolution of any of these issues identified in the 2011 FYR. Accordingly, EPA is choosing to exercise its authority pursuant to Paragraphs II.B.7 and II.E.6. of the SOW.

Identification of Project Manager

Under Paragraph 34 of the Consent Decree the Settling Defendants are required to identify their project manager. EPA understands that the Settling Defendants recently selected a new project manager. If the Settling Defendants have not already done so, EPA requests that Settling Defendants provide to EPA, in writing, the name, address, and telephone number of their project manager.

Request to Reduce Financial Assurance Amount

Paragraph 81 of the Consent Decree provides that "Settling Defendants shall provide financial security in the amount of \$40 million in one of the forms permitted under 40 C.F.R. § 264.145, including the form of audited financial statements which satisfy the substantive criteria thereof, to assure completion of Work at the Site." EPA audited this matter to determine compliance by the Settling Defendants with the financial assurance provisions of the Consent Decree. EPA determined that the Settling Defendants have not provided an adequate demonstration of financial security, as required under paragraph 81 of the Consent Decree. On April 12, 2013, the Settling Defendants asked for a reduction the financial assurance amount from \$40,000,000 to approximately \$6,800,000. The \$6,800,000 amount is the Settling Defendants' estimate of the net present value of the cost of remaining operation and maintenance work at the Site. U.S. EPA at this time cannot agree to a reduction in the amount of the financial assurance that the Settling Defendants are required to provide, because of the uncertainty regarding the potential need for additional remedial action capital costs to address the problems discussed in this letter.

Communications

Consistent with Paragraph 33 of the Consent Decree "[t]o the maximum extent possible, except as specifically provided in the Consent Decree, communications between Settling Defendants and U.S. EPA concerning implementation of the Work under this Consent Decree shall be made between Settling Defendants' Project Coordinator and the RPM/OSC." Consistent with the legal profession's ethical standards, however, should Settling Defendants' attorneys believe that it is necessary for them to communicate with EPA regarding matters involving implementation of the Consent Decree, they should go through EPA's legal counsel.

Please provide copies of your response to this letter, including copies of submittals required by this letter, to EPA's RPM, Bill Ryan, and to Jeffrey A. Cahn, Associate Regional Counsel, EPA.

Conclusion

Should your project manager have any questions regarding these requirements, please contact the RPM, Bill Ryan, at (312) 353-4374. All communication from counsel should be directed to Jeffrey A. Cahn, Associate Regional Counsel, at (312) 886-6670.

Sincerely,



Thomas R. Short Jr., Chief
Remedial Response Branch 2

cc: William Ryan, EPA, SC-6J
Jeffrey A. Cahn, EPA, C-14J
Kristi Zakrzewski, MDEQ